

FCC Unveils New Research that Measured Broadband Performance; Continues Consumer Empowerment Campaign to Help Americans Choose the Right Broadband Service Package at Home

As part of its intensive ongoing efforts to expand access, promote adoption, and spur innovation through broadband, the FCC conducted the first nationwide test of residential wireline broadband service. The result is today's report, "Measuring Broadband America Plan" <http://www.fcc.gov/measuring-broadband-america/>, first proposed in the National Broadband Plan <http://www.broadband.gov/plan/>, which takes major steps to empower consumers and enhance competition in the home broadband services marketplace. As part of this effort, the FCC today unveiled new consumer resources to help Americans take the confusion and mystery out of choosing the speed they need, including a step-by-step guide.

HOW WILL CONSUMERS BENEFIT?

- Consumer confusion about different broadband service packages is high. **A recent FCC survey found that 80 percent of consumers did not know what speed they purchased from their Internet Service Provider (ISP).** And even if consumers examine their bills, details about broadband speed often remains unclear.
- In conjunction with the report as well as the data set, the FCC has released **new consumer education resources** <http://www.fcc.gov/guides/broadband-service-home-consumers-guide/> to help Americans understand broadband speeds, assess their home needs, choose the right package and continuously evaluate broadband performance. This builds on previous work by the FCC to empower consumers against bill shock, cramming, and to educate parents about the benefits and risks of location-based services.
- By continuing to shine a spotlight on actual versus advertised speeds, the FCC is ensuring accountability, increasing transparency and enhancing competition in the marketplace. If consumers make informed choices, companies will likely invest in new products, services and business models to compete more aggressively and offer greater value.
- Researchers and developers will have access to the report's entire dataset, which can spur innovation and job creation, leading to new applications and online services.

WHAT ARE THE REPORT'S MAJOR FINDINGS?

- For most major broadband providers, actual speeds are generally 80%-90% of advertised speeds or better, although performance varies by technology and service provider.
- Even during peak usage periods—between 7:00 pm and 11:00 pm on weeknights, when more home users are online and service quality declines—most major broadband providers deliver actual speeds that are 80% of advertised speeds or better.
- That's significantly better than a study of 2009 broadband performance in the U.S. and a recent study of broadband performance in the UK, both of which found actual speeds were roughly 50% of advertised.
- All technologies measured – DSL, cable, and fiber-to-the-home broadband – can deliver good service to consumers depending on their needs.
- While download speed is the major factor affecting service performance, upload speed and latency (lag time in transmitting data) also matter for some applications.
- Increased speed improves performance, but with some limits. For basic Web browsing—viewing web pages but not downloading or streaming online video—performance improves as speeds increase, but only up to ~10 Mbps. However, high-demand applications like video conferencing, HD video streaming, gaming, or multiple activities occurring within one household may benefit from very high speeds.

HOW WAS THE RESEARCH CONDUCTED?

- Unprecedented collaboration between the FCC and 13 Internet service providers (ISPs),¹ academic researchers from MIT and Georgia Tech, technology vendors and consumer groups.
- Participating ISPs account for 86 percent of all U.S. wireline broadband subscribers.
- Used high standards of sampling and statistical analysis to select 6800 representative homes for testing.

¹ Participating ISPs were: AT&T; Cablevision; CenturyLink; Charter; Comcast; Cox; Frontier; Mediacom; Insight; Qwest; TimeWarner; Verizon; and Windstream.

- Conducted 13 different tests in each home, multiple times per day, over several months, to produce more than 4 billion data points from more than 100 million tests of broadband performance.
- Measured speed and performance *as broadband is delivered to the home* – before service is affected by equipment, home networks, or other factors – so that different service providers and technologies can be compared scientifically.